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REMARKS

Applicants wish to thank the Examiner for considering the present application. In the Office Action dated April 19, 2005, claims 1-10 are pending in the application. The allowability of claims 9 and 10 if rewritten in independent form is acknowledged. Applicants respectfully request the Examiner for reconsideration of the rejections.

Claims 1-2 and 5-7 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Araki* (5,543,813).

As the Board pointed out in its previous Opinion in this matter, "Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations." *RCA Corp v Applied Digital Data Systems, Inc.*, 221 USPQ 35, 38 (Fed.Cir.).

The present invention solves problems not identified or solved in the prior art by providing a satellite system that has at least a first satellite and a second satellite wherein the first satellite and the second satellite generate a respective first set of spot beams that partially covers a land mass and a second set of spot beams that together with the first set of spot beams provides ubiquitous coverage over the land mass. A variation of the ubiquitous coverage theme is presented in claims 7 and 8 which are directed to a system in which the first plurality of spot beams have beam segment portions that correspond to areas or portions of the beam which are shown in Figure 13. The beam segment portions may be individually controlled so that based upon a predetermined condition these beam portions may be individually adjustable. As is known in the art, spot beams typically are controlled as one continuous beam and therefore portions of the beam corresponding to an area upon the earth are not individually adjustable.

Admittedly, the *Araki* reference teaches two satellites, each of which generate beams. The Examiner points to Figs. 3-4 and 7 as well as Col. 4, lines 28-27, and Col. 5, lines 29-49. The *Araki* reference is specifically directed for determining and

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registering the location of a mobile terminal for communication with non-geosynchronous satellites. Figs. 3, 4 and 7 each illustrate that a satellite may have a beam that overlaps another beam. The *Araki* reference works by receiving identification codes associated with each spot beam and transmitting the identification codes with the times received to the satellite and to a land station. Then, a desired beam for transmitting to the specific mobile user is identified and used. References to land masses in the *Araki* reference are specifically set forth in Figs. 2 and 6. In Fig. 2, beams 30-7 and 30-7' are two consecutive time periods of the same beam. That is, beam 30-7 and 30-7' are the same beam at different times and therefore do not actually appear at the same time as illustrated in Fig. 2. Even if beams 30-7 and 30-7' are illustrated, ubiquitous coverage over the land mass is not illustrated. In Fig. 6, two different beams 31-4 and 30-7 are generated from different satellites. The location 10 is merely an area that is estimated as the location information of the mobile terminal 1. Although one of the satellite beams may be arguably described as partially covering, the second satellite spot beam does not provide ubiquitous coverage over the land mass. Also, from looking at Figs. 3, 4 and 7, the area covered by the satellites is illustrated as the larger circle in which the individual beams are illustrated. No land mass is shown in Fig. 3. However, earth stations are shown. The beams generated by the satellite do not extend to the earth station. Applicants respectfully submit that this is more evidence that ubiquitous coverage is not provided by the combination of the beams from the first satellite and the second satellite.

On pages 2 and 3 of the latest Office Action, the Examiner appears to be fixed as to the definition of substantially ubiquitous coverage. What the Examiner fails to realize is the wording of the claims recites substantially ubiquitous coverage over the land mass. Although some type of land is illustrated in the *Araki* reference, partially covering the land mass with spot beams from a first satellite and providing substantially ubiquitous coverage over the land mass with a second plurality of spot beams in combination with the first plurality of spot beams. It should also be noted

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that segmented beams are described with respect to claims 7-10 and it is not implied that the segmented beam limitations are in claim 1. Claims 2 and 5-7 depend from claim 1 and are believed to be allowable for the same reasons set forth above. Applicants respectfully submit that the Examiner intended not to reject claim 7 under this section but addresses claim 7 below.

Claims 7-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Araki* in view of *Sturza* (5,548,294). Applicants respectfully traverse.

As mentioned above, the *Araki* reference fails to teach or suggest the specific limitations of claim 1. In addition, the *Araki* reference does not teach spot beams having a plurality of beam segment portions as the Examiner points out on page 6 of the Office Action. The *Sturza* reference is provided to teach segmented spot beams. The Examiner points to Col. 5, lines 56-65. Applicants respectfully submit that this passage does not refer to segmented beams. These passages merely state, "Each beam illuminates a segment of an Earth-fixed grid. The beams are formed by each multibeam antenna, and are focused on the segment of the Earth-fixed grid by a dielectric lens." The *Sturza* reference in the next paragraph, Col. 5, lines 66-67, through Col. 6, line 2, states, "The radio beams which are generated by the multibeam antenna system are precisely controlled so they illuminate 'Earth-fixed' cells which are segments of an Earth-fixed grid." Thus, it appears that the Earth has segmented cells which is common in the art. What is not taught or suggested is that the beams themselves are segmented. Applicants therefore respectfully request the Examiner to reconsider the rejection of claims 7 and 8 as well.


In light of the above amendments and remarks, Applicants submit that all objections and rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

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Respectfully submitted,



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